DOCUMENT RESUME

ED 443 090 CS 014 030

AUTHOR	Graves, Michael F.
TITLE	Fostering High Levels of Reading and Learning in Secondary Students.
INSTITUTION	International Reading Association, Newark, DE.
PUB DATE	1999-10-00
NOTE	10p.
AVAILABLE FROM	http://www.readingonline.org.
PUB TYPE	Opinion Papers (120)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Content Area Reading; Learning Strategies; *Reading Achievement; Secondary Education; *Secondary School Students
IDENTIFIERS	Reading Uses; Scaffolding; *Teaching for Understanding

ABSTRACT

Reading for students beyond the primary and lower elementary grades gets relatively little attention. Despite the widespread acceptance of the importance of higher levels of literacy for students, levels that can only be achieved across the years of elementary and secondary school, most educators, researchers, and policymakers focus their attention on the lower grades. Two contemporary constructs, however, have the potential to change the way secondary teachers teach. These are the "teaching for understanding" approach and the concept of scaffolding students' learning. David Perkins's approach in working with Harvard's Project Zero recognizes that teaching for understanding must go beyond simply presenting students with information. The educator must ensure that students accomplish three tasks: retain important information; understand topics deeply; and actively use the knowledge they gain. Perkins argues that fewer topics should be taught and taught more thoroughly than is typical. More specifically, he suggests that a substantial amount of teaching should be done in fairly lengthy units with several specific features. He delineates these features in a four-part framework: generative topics; understanding goals; understanding performances; and ongoing assessment. Reading plays an important role in teaching for understanding in that much of the learning that students do as they come to understand a topic should and will come from reading. The influence of this orientation on the reading included in secondary classrooms is straightforward--generative topics and understanding goals should prompt much of the reading that students do. Attached are annotated lists of 22 references and 5 Web sites. (NKA)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 443 090

Fostering High Levels of Reading and Learning in Secondary Students.

by Michael F. Graves

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

CS 014 030

J.M. Irwin

BEST COPY AVAILABLE

Fostering High Levels of Reading and Learning in Secondary Students

An Invited Commentary

Michael F. Graves
University of Minnesota

Note: After reading this article, please visit the transcript of the discussion forum to view readers' comments. For a list of related postings, click here.

When this piece airs, or does whatever an online article does when it actually goes online, I will have been at the University of Minnesota for 29 years, having been hired as an assistant professor in the Department of Secondary Education in September 1970. A lot has, of course, changed in those 29 years -- at the University of Minnesota, in the world of reading, and in the world of learning more generally. At the university, the Department of Secondary Education has been absorbed into the Department of Curriculum and Instruction. In the world of reading, skills management systems and scope and sequences have disappeared, while whole language, literature-based instruction, the reading wars, phonemic awareness, balanced instruction, and a host of other concerns, causes, and conflicts have emerged. And in the world of learning, the cognitive revolution and schema theory are now part of the old guard, while constructivism, situated learning, and sociocultural concerns are just a few of the new features of today's learning landscape.

But one thing has not changed. Reading for secondary students -- in fact, reading for students beyond the primary and lower elementary grades -- gets relatively little attention. Here in the United States, as elsewhere around the world, there is widespread acceptance of the importance of higher levels of literacy for students, levels that can only be achieved across the years of elementary *and* secondary schooi -- and beyond. Yet despite this acceptance, most educators, researchers, and policy makers focus their attention on the lower grades. For example, the report on reading most often cited in the U.S. literature at the moment, *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998), concentrates on preschool through third grade; the Center for the Improvement of Early Reading Achievement, the national reading research center funded by the U.S. federal government, focuses on beginning reading; and the most recent "What's Hot, What's Not" poll in *Reading Today* (Cassidy & Cassidy, 1999) lists phonemic awareness as the hottest of hot topics.

The amount of attention given to secondary students is not, of course, going to be hugely influenced by this brief commentary. Nevertheless, two contemporary constructs that have the potential to change the way secondary teachers teach seem well worth highlighting. These are the "teaching for understanding" approach and the concept of scaffolding students' learning. I will address the first of these topics here and the second in an upcoming commentary.

Teaching for Understanding

Over the past decade or so, several groups of educators and researchers have given considerable attention to teaching for understanding. These include John Bransford and the Cognition and Technology Group at Vanderbilt (in press); Ann Brown, Joseph Campione, and colleagues at the University of California at Berkeley (Brown & Campione, 1996); Fred Newmann and his colleagues at the University of Wisconsin (Newmann, Secada, & Wehlange, 1995); Grant Wiggins and his colleagues working with the Association for Supervision and Curriculum Development (Wiggins, 1989; Wiggins & McTighe, 1998); and David Perkins and his colleagues working with Harvard's Project Zero (Blythe, 1998; Perkins, 1992; Wiske, 1998). Perkins' approach is the one that has been described most completely in the literature, the one I am most familiar with, and the one I will describe here. However, I would stress that each of these approaches has a number of exciting and innovative features and is well worth serious study.

A large part of understanding Perkins' notion of teaching for understanding and its importance is the

BEST COPY AVAILABLE

realization that in some ways schooling is not going well even for our best students, that all too few students attain the deep level of understanding critical in today's world (Bransford, Brown, & Cocking, 1999; Bruer, 1994; Perkins, 1992; Resnick, 1987; Ryder & Graves, 1998). Recent data from the National Assessment of Educational Progress strongly support these scholars' contention. For example, of the 12th graders tested, only 6 percent reached the advanced level in reading (Donahue, Voelkl, Campbell, & Mazzeo, 1999), only 3 percent reached the advanced level in science (O'Sullivan, Reese, & Mazzeo, 1997), and only 1 percent reached the advanced level in history (Goodman, Lazer, Mazzeo, Mead, & Pearlmutter, 1998).

Understanding, explains Perkins (1992), enables a person "to explain, muster evidence, find examples, generalize, apply concepts, analogize, represent in a new way, and so on" (p. 13). To teach for understanding, he continues, we must go beyond simply presenting students with information; we must ensure that they accomplish three tasks:

1. Students must retain important information.
2. Students must understand topics deeply.
3. Students must actively use the knowledge they gain.

In order to assist students in attaining such understanding, Perkins and others argue that we need to teach far fewer topics than we are currently teaching but to teach them far more thoroughly than we typically do. More specifically, Perkins suggests that a substantial amount of our teaching should be done in fairly lengthy units with several specific features. He delineates these features in a four-part framework:

- generative topics
- understanding goals
- understanding performances
- ongoing assessment

If we are going to teach far fewer topics, then we had better choose those topics wisely. This is where the concept of generative topics -- topics that are accessible and central to the subject area students are studying, but can also connect to many other topics both in and beyond that subject area -- comes in. Generative topics can be concepts, themes, procedures, historical periods, theories, ideas, and the like.

For example, consider the concept of plot. Plot is central to the study of literature; it is an important element in many types of literature and in many individual pieces of literature. But it also exists outside of literature. Historical episodes -- for example, the U.S. Civil War -- basically follow a plot, as do our lives.

As another example, consider the concept of cause and effect, which is central to much of history and literature but, like the generative topic of plot, also exists in areas outside of one or two subject areas. In fact, many (if not most) fields of study -- science, the humanities, and art, for example -- deal with cause and effect. As still another example, consider the idea of beauty, a central concept in art and literature that also plays an important role in our lives and even in science. Frank Press (1984), a past-president of the National Academy of Sciences, once spoke of the discovery of the double helix as not only rational, but beautiful.

While generative topics are a good starting point, one problem is that they are often too broad. Beauty, for example, could be studied in any age, in any medium, and in almost any field. Even though units in teaching for understanding may last two to six weeks (or longer), the time available is finite, and we almost always need to select parts of a generative topic to deal with and identify some specific goals to be attained. For example, one possible understanding goal for tenth graders studying the idea of beauty might be for students to understand that conceptions of physical beauty have changed over time -- that, for example, an ancient Roman's idea of beauty differed from that held by Italians during the Renaissance and from that held by Italians today. Another possible understanding goal for these tenth graders might be to understand that the idea of physical beauty differs from culture to culture and even from individual to individual. Or consider the generative topic of the democratic electoral process, being explored by a group of ninth graders. Of course, the students will be able to deal only with some aspects of this complex topic. In this case, one goal might be for students to gain a general understanding of elections; another might be to understand the major issues in a particular campaign.

These goals are, in fact, those developed by Megan Briggs and Don Perkins (no relation to Harvard's David

Perkins), two social studies teachers who designed an understanding unit titled "The Election Process and Campaigns of 1996." The unit was developed for typical classes of ninth graders and involved students in a variety of interesting, meaningful, and creative instructional activities over a period of about four weeks. To demonstrate their mastery of these understanding goals, students took part in a number of what David Perkins terms "understanding performances." Fairly early in the election unit, students demonstrated their understanding of voting requirements by creating webs on the topic. Later, they demonstrated their understanding of referenda by actually developing a few to propose to their school. And still later, they demonstrated their ability to locate information on political questions by searching the Internet to obtain a sample of media responses to major campaign issues. Note that students engaged in these understanding performances throughout the unit. This is important. Students should be engaged in understanding performances throughout the period that they are studying a topic and not, as is so frequently the case, by being asked to produce a product only at the end of the unit.

The final part of Perkins' framework, ongoing assessment, is closely related to students' participation in understanding performances. Just as students should be engaged in understanding performances throughout the unit, students and teachers should be engaged in ongoing assessment. One of the things that teachers consider here is students' understanding performances -- for example, assessing whether the referenda students developed were good examples. If some were not, then the students who created them need feedback and some reteaching -- and they need these things early on, so that they do not continue through the unit with misconceptions that can cause confusion and thwart learning of other concepts.

Each of the understanding performances students undertake offers additional opportunities for ongoing assessment, and for feedback and reteaching as needed. However, ongoing assessment is not limited to understanding performances. At all points in the unit and with various techniques -- during individual conferences, small group discussions, writing assignments, or other events -- it is important to assess whether students understand and to be ready to assist them in reaching understanding if they are experiencing problems. As Perkins and Blythe (1993) put it, "To learn for understanding, students need criteria, feedback, and opportunities for reflection from the beginning of and throughout any sequence of instruction" (p. 7).

Obviously, none of us would want to teach for *mis*understanding or to have in mind the goal of students' forgetting whatever we are teaching. Yet we know that in all too many cases, misunderstanding and forgetting take place. Teaching for understanding is hard. But by realizing that we can't teach everything -- or, to be more precise, that students can't learn, understand, and remember everything -- and by using tools such as Perkins' four-part framework in situations where they are appropriate, understanding is a goal we can help our students reach.

How Does Reading Fit In?

Thus far, I have described the general concept of teaching for understanding, explained its critical importance in today's world, and given an overview of David Perkins' approach. I have not, however, discussed the role of reading in teaching for understanding or the influence a teaching for understanding orientation should have on the reading we include in secondary classrooms.

Reading plays an important and easily explained role in teaching for understanding, in that much of the learning that students do as they come to understand a topic should and will come from reading. Journals, books, and libraries hold much of the understanding -- or at least much of the information necessary to that understanding -- that humankind has accumulated over the millennia. At the same time, we in reading need to realize that reading is by no means the only way of acquiring information and coming to understand. Other media -- audiotapes, videotapes and motion pictures, the Internet, and even television -- are important sources of learning and understanding. So too are the other modes of communication -- speaking, listening, and writing. Both discussion and writing are, in fact, crucial to coming to understand topics, to demonstrating that understanding, and to communicating it to others. Even more important, *doing* something -- somehow participating in the realm one is seeking to understand -- is often a key to understanding. Thus, while reading plays a huge role in teaching for understanding, it is not the sole member of the cast.

The influence of a teaching for understanding orientation on the reading we include in secondary classrooms is

equally straightforward. Generative topics and understanding goals should prompt much of the reading that students do. This means that in classrooms where teachers teach for understanding, students will be reading about fewer topics, but they will be spending considerably more time on those topics.

It is vital that students get sufficient guidance in exploring the relatively small number of topics they will work with. Students need our support as they investigate and come to understand these topics. It is not nearly enough simply to help students identify important aspects of their topics and locate large amounts of information on them. Students also need models, modeling, coaching, prompting, encouragement, and feedback delivered at just the right time. In brief, they need a lot of scaffolding -- both specific scaffolding in reading (see, e.g., Graves & Graves, 1994) and other sorts scaffolding (see, e.g., Hogan & Pressley, 1997). Students engaged in learning for understanding will also profit from instruction -- more instruction, I believe, than is typically suggested in the teaching for understanding literature. Finally, classrooms where teaching for understanding is going on should put a premium on scaffolding and instruction that prepares students to identify generative topics and understanding goals themselves, and to become independent in researching and coming to understand those topics. Providing these sorts of scaffolding and instruction will be the topic of my next commentary.

Go to "no frames" version of article
Go to complete annotated reference list
Go to complete annotated list of websites
Go to discussion forum

If you enjoy this commentary, you might also be interested in the following *Reading Online* postings:

- Adolescent Literacy: How Best Can Middle and High School Students Be Supported?, a discussion topic
- Mapping the Possibilities of Integrated Literacy Instruction, a research report by Sandra M. Biondo, Taffy E. Raphael, and James R. Gavelek

---

Reading Online, www.readingonline.org
Posted October 1999
© 1999-2000 International Reading Association, Inc. ISSN 1096-1232

Annotated References

Blythe, T. (1998). *The teaching for understanding guide.* San Francisco: Jossey-Bass.
A very practical, teacher-oriented guide to teaching for understanding as developed by David Perkins and his colleagues.

Bransford, J.D., Brown, A.L., & Cocking, R.R. (Eds.). (1999). *How people learn: Brain, mind, experience, and school.* Washington, D.C.: National Academy Press.
The results of a two-year review of the research on teaching and learning, conducted under the auspices of the National Research Council.

Bransford, J.D., with the Cognition and Technology Group at Vanderbilt. (in press). Adventures in anchored instruction: Lessons from beyond the ivory tower. In R. Glaser (Ed.), *Advances in instructional psychology* (vol. 5). Mahwah, NJ: Erlbaum.
This chapter analyzes some of the learning from the interactive, multimedia project conducted by the Vanderbilt University group.

Brown, A.L., & Campione, J.C. (1996). Psychological theory and the design of innovative learning environments: On procedures, principles, and systems. In L. Schauble & R. Glaser (Eds.), *Innovations in learning: New environments for education* (pp. 289-325). Mahwah, NJ: Erlbaum.
A description and analysis of the "community of learners" approach.

Bruer, J.T. (1994). *Schools for thought: A science of learning in the classroom.* Cambridge, MA: MIT Press.
An informed layperson's view of how ideas from cognitive psychology can improve student learning.

Cassidy, J., & Cassidy, D. (1998/1999, December/January). What's hot, what's not for 1999. *Reading Today,* 1, 28.
This annual survey of key topics in reading research and practice appears in the bimonthly newspaper of the International Reading Association (http://www.reading.org), a 90,000-member professional organization that also publishes this e-journal.

Donahue, P.L., Voelkl, K.E., Campbell, J.R., & Mazzeo, J. (1999). *NAEP 1998 reading: Report card for the nation and states.* Washington, DC: Department of Education.
A summary of this report and the text of the full report are available at http://nces.ed.gov/nationsreportcard/pubs/main1998/1999500.shtml.

Goodman, M., Lazer, S., Mazzeo, J., Mead, N., & Pearlmutter, A. (1998). *Research report: 1994 NAEP U.S. History Group assessment.* Washington, DC: Department of Education.
A summary of this report and the text of the full report are available at

http://nces.ed.gov/nationsreportcard/pubs/main1994/98533.shtml.

Graves, M.F., & Graves, B.B. (1994). *Scaffolding reading experiences: Designs for student success.* Norwood, MA: Christopher-Gordon.
Describes and gives examples of a flexible instructional framework to assist students in understanding, learning from, and enjoying individual selections.

Hogan, K., & Pressley, M. (Eds.). (1997). *Scaffolding student learning: Instructional approaches and issues.* Cambridge, MA: Brookline.
A strong collection of descriptions of different sorts of scaffolding.

Newmann, F.M., Secada, W.G., & Wehlage, G.G. (1995). A guide to authentic instruction and assessment: Vision, standards and scoring. Madison, WI: Wisconsin Center for Educational Research.
An overview of Newmann's authentic instruction approach.

O'Sullivan, C.Y., Reese, C.M., & Mazzeo, J. (1997). *NAEP 1996 science: Report card for the nation and the states.* Washington, DC: Department of Education.
A summary of this report and the text of the full report are available at http://nces.ed.gov/nationsreportcard/96report/97497.shtml.

Perkins, D. (1992). *Smart schools: From training memories to educating minds.* New York: Free Press.
A well-written, engaging, and comprehensive consideration of teaching for understanding.

Perkins, D. (1993, Fall). Teaching for understanding. *American Educator.* Available online at http://www.21learn.org/cats/testing/perkins.html.

Perkins, D., & Blythe, T. (1993). Putting understanding up front. *Educational Leadership, 51*(5), 4-7.
A concise description of Perkins' approach to teaching for understanding.

Press, F. (1984, May 30). Address delivered at the annual commencement convocation, School of Graduate Studies, Case Western Reserve University, Cleveland, OH.

Resnick, L.B. (1987). *Education and learning to think.* Washington, D.C.: National Academy Press.
A brief but very powerful discussion of higher level thinking and its importance.

Ryder, R.J., & Graves, M.F. (1998). *Reading and learning in content areas* (2nd ed.). New York: Wiley.
Parts of the description of Perkins' approach are taken with permission from this text. The webpage for this book, part of John Wiley & Sons' website, describes its contents, which include a chapter on teaching for understanding.

BEST COPY AVAILABLE

Snow, C., Burns, S., & Griffin, P. (1998). *Preventing reading difficulties in young children.* Washington, D.C.: National Academy Press (NAP).
The NAP website devotes a page to this widely publicized National Research Council review of research relevant to beginning reading instruction (http://www.nap.edu/catalog/6023.html). Included are a description, reviews, and links to the full text of the publication, one of more than 1350 books that NAP makes available online.

Wiggins, G. (1989). The futility of trying to teach everything. *Educational Leadership, 47*(2), 44-48, 57-59.
The title of this article describes it well. Here, Wiggins highlights one of the premises behind the teaching for understanding perspective.

Wiggins, G., & McTighe, J. (1998). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.
This is the basic description of Wiggins and Tighe's approach to teaching for understanding.

Wiske, M.S. (Ed.). (1998). *Teaching for understanding: Linking research with practice.* San Francisco: Jossey-Bass.
A detailed look at teaching for understanding by the participants of the Harvard Teaching for Understanding research group.

Go back to article
Go to annotated list of websites
Go to online discussion forum

Reading Online, www.readingonline.org
Posted October 1999
© 1999-2000 International Reading Association, Inc. ISSN 1096-1232

BEST COPY AVAILABLE

Annotated List of Websites

- The Center for the Improvement of Early Reading Achievement (CIERA) website (http://www.ciera.org/) offers general information about the center, details of center reports (some are available online, while others can be purchased through the site), and links to other websites relevant to improving the reading achievement of young children.

- At the area on the Vanderbilt website devoted to the Learning Technology Center (http://peabody.vanderbilt.edu/ctrs/ltc/), which houses the Cognition and Technology Group, visitors will find general information about the center and its people, research, and resources. Among the research most directly related to teaching for understanding is the Schools for Thought project, designed to restructure the school day consistent with cognitive and social research on learning and instruction.

- The website for Wiggins and McTighe's entire Understanding by Design (UbD) package (http://ubd.ascd.org/) provides information about UbD resources and training workshops, an opportunity to contact the UbD authors, and other UbD material. Some areas of the site are still under construction, and registration is required for full access to bulletin boards, etc.

- The homepage of Harvard's Teaching for Understanding (TFU) research group (http://learnweb.harvard.edu/alps/tfu/index.cfm) contains information on TFU, examples of TFU projects, tools for designing TFU instruction, and opportunities to communicate with TFU staff. At present, a number of the site's features require registration, and user fees will eventually be levied. The TFU pages are housed at the website of Active Learning Practices for Schools, a Harvard Project Zero resource.

- The full text of Perkins' "Teaching for Understanding," which first appeared in the Fall 1993 issue of *American Educator* and describes the author's work and thinking, is available online within the website of the 21st Century Learning Initiative (http://www.21learn.org/cats/testing/perkins.html). The initiative is a "transnational programme to synthesize the best of research and development into the nature of human learning, and to examine its implications for education, work and the development of communities worldwide." Its site contains the full texts of a number of articles relevant to the initiative's goals and to teaching for understanding, including work by Alan Collins, Howard Gardner, and Neil Postman.

Go back to article
Go to annotated reference list
Go to discussion forum